

REMARKS/ARGUMENTS

This Amendment is submitted in response to the April 7, 2006 Office Action issued in connection with the above-identified patent application. Claims 1-15 have now been amended, claim 1 being independent. Claims 16-24 have been canceled and replaced by new claims 25-30, claim 25 being independent. New claims 31-35 have been added containing some of the limitations originally found in claims 5, 6, and 7. Additionally, a further new claim 36 has been added. No new matter has been added. A check for \$150.00 for the 3 extra claims is enclosed.

In the pending Office Action, the Examiner has objected to claims 17-20 and 22-24 under 37 C.F.R. § 1.75(c) as being in improper form because a claim cannot depend from claims in the conjunctive form. By the amendment above, claims 17-20 have been replaced with corresponding claims 27-30 which have been re-configured to avoid any improper dependencies, and claims 22-24 have been canceled. Accordingly, withdrawal of this objection is respectfully solicited.

The Examiner also rejected claims 1-16 and 21 under 35 U.S.C. § 101 as allegedly embracing both product or machine and process. Claims 1-15 have now been amended to more clearly define the invention claimed therein as an apparatus (a drilling installation) while claim 16 has been canceled and replaced by a new independent method claim 25 directed to a method of drilling. Claim 21 has been canceled. Accordingly, withdrawal of this rejection is also respectfully solicited.

The Examiner further rejected claims 1-16 and 21 under 35 U.S.C. § 112, second para., as allegedly failing to define the invention properly, with specific reliance upon certain phrases used therein. The claims have been amended to conform to accepted U.S. practice and idiom, and it is believed that all potential bases for rejection under 35 U.S.C. §112, second para., have

been addressed. It is specifically noted that the Examiner called the applicants' attention to those claims in which a broad range of values for a specific limitation was followed by a more narrow "preferred" range. All such broad/narrow phraseologies have been removed from the claims with corresponding new claims 31-35 added directed to the narrower "preferred" ranges. Accordingly, withdrawal of the rejection under 35 U.S.C. § 112, second para., is respectfully solicited.

Election/Restriction Requirement

The Examiner has indicated that, upon correction of the above-noted deficiencies, the application might be subject to a restriction requirement, and identified four allegedly distinct species which, the Examiner contended, may be subject to a restriction requirement in the absence of the allowance of any generic claim.

The applicants respectfully disagree with the Examiner's contentions and traverse the restriction requirement, if made.

At the outset, it is noted that the Examiner has recognized that claims 1-8 are generic apparatus claims. The Examiner also noted that claim 16, now re-written and re-presented as new claim 25, is a generic method claim. As will be discussed below, it is believed that these claims are allowable, and so the prospective requirement for an election should be moot.

However, to comply with the Examiner's requirement, an election will be made below.

The Examiner identified the allegedly distinct species as those shown in Figures 7, 11, 14 and 16. The applicants respectfully disagree that these Figures show distinct species. Setting aside the issue of the allowability of a generic claim, the alleged "species" of Figure 16 is not distinct from the other figures. Figure 16 shows the controlled burying means as having a rigid

external structure, but this is not inconsistent with the other illustrated embodiments of the controlled burying means, and so therefore does not present a distinct species requiring an election.

Nonetheless, in light of the Examiner's expressed requirement for an election, and with the traverse mentioned above, the applicants hereby provisionally elect the species denominated as Species IV by the Examiner, illustrated in Figure 16 and claimed in dependent claims 14, 15 and 30. The applicants reserve the right to file any appropriate divisional application(s) should that be necessary and appropriate, and reserve the right to argue for the allowance of the non-elected claims if required.

In compliance with the Examiner's requirement, and with traverse, the applicants hereby identify those claims which the applicants understand to be within the ambit of each species defined by the Examiner:

- Species I drawn to figure 7 and claims 9, 27
- Species II drawn to figure 11 and claims 10, 11, 28
- Species III drawn to figure 14 and claims 12, 13, 29
- Species IV drawn to figure 16 and claims 14, 15, 30

However, for the reasons set forth above, it is respectfully submitted that no restriction requirement is appropriate, and none should be imposed.

Rejection under 35 U.S.C. § 103

The Examiner also rejected claims 1-16 and 21 under 35 U.S.C. § 103(a) as allegedly obvious in light of United States Patent No. 3,333,432 (Hale, *et al.*) or United States Patent No. 3,824,798 (Shiroyama, *et al.*) or United States Patent No. 4,812,079 (Johnson, *et al.*) or Japanese document 53-118791 or WIPO document EP 0952301 in view of United States Patent No. 3,405,533 (Fries) or United States Patent No. 3,916,632 (Thomas).

The applicants have carefully considered the Examiner's rejection, and the reasons offered in support thereof, together with the references applied by the Examiner, and respectfully submit that the claims are patentably distinct from the references applied by the Examiner, in any combination. The applicants therefore respectfully request the withdrawal of the rejection and the early allowance of the claims.

The following description of the invention is taken from the specification, and is provided solely for the Examiner's convenience. It is not intended to argue limitations not found in the claims, or to limit the claims.

The invention is directed to the field of underwater off-shore drilling installations, and methods for drilling using such installations. The difficulties faced in this field are manifold, and different from those found in other applications. The need to maintain the integrity of the drilling apparatus while undergoing the stresses of varying swells, currents, tides and temperatures makes the environment in which the instant invention is employed one of the most formidable in the modern world.

The instant invention addresses the hostile environment faced by those of ordinary skill in the art by providing for a telescoping guide for the pipe containing the drilling tool. In this way, the drilling riser need not be perfectly rigid to withstand by brute force the stresses imparted by swells, currents, tides and temperatures along the length of the riser. The telescoping riser provides some flexibility when facing these forces, so that the protective housing surrounding the drilling equipment may bend, but not break, and thereby maintain its integrity. The flexibility of the guide pipe is important, since constructing a rigid guide would require an inordinately thick housing, which then leads to higher costs in manufacturing,

transporting and deploying the guide. Even then, in deep-sea environments, a rigid pipe would likely fail.

The flexible guide pipe is particularly useful in the vicinity of the sea bottom, since the drilling borehole must be maintained in a constant location, otherwise there would be no progress in the drilling. Notwithstanding this need for stability at the sea bottom, the riser may bend and flex all the way to the surface, where the drilling platform may rise and fall with the tides and the natural swell of the sea, as well as move on the surface of the water by wind and tides. There is thus the potential for great frictional forces to be present in the vicinity of the borehole at the sea bottom, and the claimed invention provides flexibility at the borehole to accommodate those forces in an economical and efficient fashion. This is the problem to which the invention is directed.

The references applied by the Examiner are predominately concerned with another field of endeavor: the laying of undersea cable, where there is no similar concern for the integrity of the pipeline above the sea bottom, and there is no constant position of a borehole, since the entire purpose of the laying of a cable is to move along the length of the sea bottom laying cable along the way. There is no stationary borehole upon which the shifting currents, swells, tide, wind and other forces of nature play out for long periods of time, sometimes even for decades. There is thus no comparable need to allow for flexibility of a cable laying guide in a single, fixed location. Thus, those references which are directed to the laying of cable are completely inapposite to the problems faced by those of ordinary skill in the art of undersea drilling as in the case of the present invention. Those of ordinary skill in the art of off-shore drilling would therefore not look to the art of cable laying for solutions to the problems faced in their art.

The WIPO reference, however, is concerned with the same field as that of the invention, and, indeed, was even cited by the applicants in the body of the specification herein. However, as the Examiner has agreed, that reference does not teach the use of a telescoping guide to address the problem of friction near the borehole. For that element of the claimed invention, the Examiner has applied two references, in the alternative: Fries and Thomas.

Fries is directed to the art of laying cable, and therefore not applicable to the instant problem, for the reasons discussed above. Additionally, Fries is directed to a vibrating plow for forming a furrow, and laying a cable in the furrow (col. 1, lines 21-23). The problems faced in laying a cable in a furrow, which, by definition, means that the cable is being laid across a length of the sea bottom rather than drilling a hole in a single location, are quite different from those faced in drilling a stationary borehole. One of ordinary skill in the art of undersea drilling at a fixed location is not going to find assistance in addressing problems in his art by looking into “furrow-making” equipment. In any event, the apparatus described by Fries is quite different, since Fries has no concern with drilling holes in a stationary location. Thus, the combination of Fries with the WIPO device, even if made, would not result in the claimed invention.

As to the Thomas device, it is noted that Thomas discloses a *rigid* vertical structure through which a pipeline may extend. There is no flexibility in that structure and such a structure would not be useful in the context of a deep sea off-shore drilling installation, since the Thomas structure would not function to allow for flexibility at the borehole, and would not permit the borehole to be made at an angle to the sea bottom, as claimed.

Thus, the combination of the Thomas reference with the teachings of the WIPO or other applied references (even if made), would not result in a drilling installation, or a method for

drilling with such an installation, as claimed. Therefore the combination(s) applied by the Examiner fall short of teaching the invention as claimed.

It is also noted that the Examiner has failed to point to any motivation in the applied art which would lead one of ordinary skill in that art to make the combination(s) suggested by the Examiner, or, if made, to form exactly the combination claimed by the applicants.

For all these reasons, therefore, it is respectfully submitted that the invention as claimed is patentably distinct from the references applied by the Examiner and therefore that the invention as claimed is patentable thereover. Withdrawal of this rejection is therefore respectfully solicited.

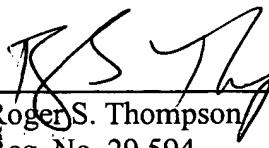
There being no further grounds for objection or rejection, and all outstanding objections and rejections having been addressed, early and favorable action on the claims is earnestly, and respectfully, solicited.

A check in the amount \$150.00 is enclosed in payment for the addition of 3 new claims in excess of the 24 claims previously paid for.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
COHEN, PONTANI, LIEBERMAN & PAVANE LLP

By



Roger S. Thompson
Reg. No. 29,594
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

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